

AN
ESSAY,
ON
The Nature, Cause, and Seat
OF
DYSENTERY,
IN
A LETTER
TO

Dr. Henry Warren of BARBADOS,

BY

Dale Ingram Surgeon and Man-Midwife.

Quibuscunque cruda deorsum secedunt,
ex atra Bile sunt, si plura, copiosiore, si
pauciora, pauciore.

Hippoc: Sectrii Aporis.

BARBADOS.

Printed for William Beeby, at the Spring
Clock, at the Corner House in Cheap-
side near the Custom-house.

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PREFACE

TO

THE READER.

BEing recommended to many of your Favours, by several worthy Merchants in *Europe*, I think it is my Duty to make such Enquiry into Diseases as *small scattered Learning* will permit me, that thereby I may appear to you worthy of such Estimable Protections.

The Care I have taken in the following Lines, I hope will be a Guard against all Accusations of *Plagiarism*, it is *what* by all Authors with the utmost detestation ought to be avoided, and was always my Aversion,

By

By tracing the Footsteps of Nature, and consulting those Laws which she has prescribed to Mechanicks (or her own Motions) *the true foundation of Philosophy is to be supported.*

With these Principles, her Pathes being paved and checker'd, the *Endeavourer* to be at the fountain of natural Knowledge cannot wander to, and fro, at random, but will be pushing directly towards the Goal; and in Process of Years, by searching into other Mens Works, he will be able to raise *a superstructure* that will excite not only the study of the Reader, but also *it's Evidence* will force his Assent.

As this Enquiry is not built on abstruse and hidden principles, I somewhat flatter my self that it will be useful and agreeable, because

because the weakest Capacity will not be led away by *obscure Fancies or interpreted Dreams.*

Plain Argument and strict Sence I have chose rather than Elegancy or politeness that it may be easy and intelligable to every Brother, and profitable to those who are Strangers to the Profession apprehending the more familiar it is, the more acceptable; and that truth always Shine clearest when it is not far removed from it's Orbit, (*viz.*) *Common Sense.*

Compassion to our short Period of Life, and Humanity to the Afflicted, are sufficient Motives to Spirit up *the Learned* to find out the most certain Remedy's for such Distempers, as we at present are least provided against; and truly what Subject deserves their attention more than that, which

Excuse

Excites the most Grievous complaints, for Life at best is but *a Toil*, therefore it should prompt them to a Vehement Desire of Curing; that each Circling Year may Glide on without the additional Burthen of Acute Distempers acquired.

As to what Errors the Judicious shall find in the ensuing Pages, I shall with the utmost humility Acknowledge and Confess, since I have not wrote with a view to impose on the Ignorant.

But, if *Caviling Heroes, surly Criticks, or Captious Wranglers, Sneer*, with a Blush I had rather pity their daring Boldness, than expose their *hurtless Folly, and Arrogance*.

The Errors of the Press and some oversights of my own, are chiefly owing to the

hurry

hurry of Business (my Profession call's me to,) which I am confident the well Bred Gentleman will over-look.

If Beauty, Life and Spirit (which are requisite qualifications for an Author) are some what wanting to encourage your Attention ; admit me the same excuse, which Ovid made when on his Exile (viz. *That good Lines never flow but from a serene and composed Spirit, for Wit fly's but slowly in a damp Air.*

However, to Obviate any Misrepresentations that may be made on the publication of this Epistle, I ask leave to declare upon my Word ; the sole Motive that induced me to take up the Pen again, was an earnest Desire of being *enroled* in your Esteem and Favour ; and how could I lay claim to

your

your Friendship, but by employing some of my Time in searching into such Disorders as have been destructive to the well being of your own Healths, as well as, Ravaging that Essential part of your Plantations (viz.) *The Lives of the Negro Slaves.*

The Method I have chose in writing ~~these few Pages~~, is the same with that of the Ancients as appears by *Galen's* Letter to *Cecilianus*, *Alexanders* epistle on Worms to *Theodorus*, *Diocles* on health to *Antigonas* &c. for I humbly conceive every Young Author ought to write by way of Letter, to some Learned Physician, whose Sagacity will prevent the Tender *Shoats* in Physick, from having their Understanding sed with false Theorys.

In the ensuing Pages I have given you the true Cause of the peristaltick Motion of
of

of the Bowels, the reason of the Jaundice, Costiveness, the Alteration of the Air in different Seasons, the Symptoms, Causes, and the various Stages of the Distemper herein treated of; and also the Methods with which it has been handled by some of the Ancient and Modern Writers, all which I have given in as concise a Manner as possible I was able.

But if I could have had, the Barometer and Thermometer with some other proper Instruments, I would have given you the weight and alteration of the Atmosphere, as also the different Degrees of Heat that has occurred since my Arrival, which would have made this Epistle somewhat Compleat; the want of which as well as part of my Books with many other Necessary's were left in England, thro' the small Notice

tice and Resolution of my Coming Abroad, therefore hope for the present, you will accept of these loose Observations.

If this superficial Performance will be of Use to any of my Brothers, or Entertainment to other Gentlemen, or should it *Excite* any to satisfy this Island, with a more perfect Essay on the Subject than I have been able to doe; I shall be well pleas'd and satisfied.

And if it meets with a favourable reception, it will prompt me to make a diligent enquiry and Tryal of all the natural Springs in this Island; which by various Experiments, shall be able to give you an Account of, together with the principles they ^{with} abound, whether of Sulphur, Steel, Allum, Cathartick, Salts &c. And also the quantity

tity each quart contains, and whether Separately or Combined.

After I have so far satisfy'd you, and find it will be agreeable, I shall Endeavour to Entertain you (If I can find Leizure from the many Avocations I may meet with) with an Account of all the Plants, Shrubs, Herbs &c. which are produced here, together with a true Distinction of their Species, and also describe their different Virtues as well as the Time and Seasons of perfection for Use.

Fearing I have made too free with your Time in this Preface, shall now take leave, and hope the following Pages will not only be Amusing, but of Beneficial Service to the Publick, whilst Zealously my future Endeavours shall be employed to give you all

the

[x]

the Satisfaction you possible can desire,
that thereby I may Merit your Esteem
and Regard, is the sincere Desire and Wish
of,

GENTLEMEN,

Your most Obedient Servant,

DALE INGRAM,

Barbados February 20th 1743-4

A
L E T T E R

TO Dr. HENRY WARREN.

GIVING,

AN ACCOUNT OF THE CAUSE,

OF

The Dysentery that Reign'd with such
Fury this last Season.

I N

B A R B A D O S.

S I R,

T H E Multitude that have sunk under
the fatal Dysentery, which hath for some
time reigned in this Town and Island in
General, have so far taken up my Attention,
as

as to prompt Me to make some Anatomical
 Inquiry into that Distemper, and as I know
 your Humanity and good Nature must
 Commiserate this general Calamity, I am
 induced to think you will cast a favourable
 Eye on an Attempt to discover the prin-
 cipal seat of the Disease; and if I shall be
 able to Point out those parts of the Body
 wherein this Disorder appears to take it's
 first rise, and trace it thro' it's dreadful
 Course, without incurring your Censure, or
 being Guilty of any Trespas on the Laws
 of Mechanism, I shall think my self suffi-
 ciently recompenced for this my small Labour
 towards the publick Service.

It is with this View, that I take the li-
 berty of sending my Opinion to you, not
 doubting but that your accustomed Genero-
 sity,

ity, will give the following Lines an Examination, and that the large Draughts you have taken of Physical and other Learning as well as your *Extensive Judgment* in *Arts* and *Sciences* which hath long appeared to this part of the World, will be a sufficient Guard against the Hazard of my Misleading any One by a groundless or Conjectural Hypothesis.

Indeed Sir, I cannot but say that an Anatomical Inquiry into the Seat of any Disease and of the parts affected thereby, seems to me to be the proper if not the only sure Ground-work whereby to proceed to investigate it's apparent Cause, and the proper Means of Cure to be applied.

I beg leave therefore to proceed to the Inquiry.

To

TO form a right Idea of the Seat of this inveterate and direful Disease, I humbly conceive it to be highly necessary to consider the natural Uses of those Viscera which are principally affected, (viz.) The Bowels with their peristaltick Motion, the Liver and Gall-bladder.

All that have attended Anatomical Lectures, must have observed this fine Motion of the Bowels, it being most Elegantly and distinctly seen in the Rabbit (the common Subject for the Demonstration) which being dissected alive, the Alternate contraction and Dilatation appear plain, and Satisfactory to every Curious Spectator, and convince every one of the Necessity of such a Motion as absolutely Useful for seperating and forcing the Chyle from the grosser partes

partes of the Ailiment or Food, without which the Blood could not be recruited, nor the Human Body daily nourish'd ; and we learn whilst the superior Section of the Bowels contracts, the Inferor is dilated, by which Actions the Excrementitious parts of the Food *taken in*, are protruded out of the Body ; which leads me to enquire how these Actions or Motions are promoted, whereby the true Cause of Fluxes will clearly appear.

As this Vermicular or peristaltick Motion is also to attenuate the Chyle, so the Allwise and great Creator foresaw the Danger they would be subject to, from their violent and continual Action, therefore to prevent them from being Lacerated, or torn, ordaind their Structure of five Coates
each

each of which is seperately Useful as appears from the Anatomical Terms they are known by (viz.) *Membranous, Cellulous, Musculous, Nervous, and Villous.*

The manner how this Action is increas'd or Diminish'd, is from a larger or less quantity of some Fluid, stimulating first the Nervous Coat, and thereby the Muscular is set in Action.

The Fluid that appears subservient for this purpose I humbly conceive and apprehend to be the Bile, because it's constituent parts are Saline and Sulphurous, which particles are pungent, and have an active Quality, and consequently are most capable to procure a Stimulus on the Nervous Coat of the Bowels, and at present I know not of any other Fluid in the Animal System

System so well situated and readily adapted for this necessary Intent of Nature.

I must beg leave to Observe that there are two sorts of Bile the *Hepatick* and *Cystic*; The former is Milder, Thinner and more Insipid, than the latter, which is of a deeper Colour, very bitter, pungent, and sharp, and also that the Hepatick Bile in a natural State is continually drilling into the Duodenum thro' the Ductus Cholidochus, which is compos'd of the Trunk of the Forus Biliaris and Cystic Duct.

This Pipe infusates it self thro' the Coates of the Bowel as it passes thro it, not in a direct and straight Line, but Oblique and some what like the Neck of a Tea Pot; and very probably Nature so ordain'd it, because the Bile should not too precipi-
tately

tately Rush in. This is the employment of the Hepatick Bile, whilst the Cystic is laid up in the Gall-bladder as in a Reservoir being partly seperated by Glands lying in the inward Coates of the Cystic in like manner, as the Ceramen or Ear-wax in the funnel of the Ear.

That this Bile does not always flow out is evident from the Cystis having it's Cervix (a) *Stricta, et fundo Altior*, but I confess it may easily be squeez'd by Compression thro' any increas'd Action of the Abdominal Muscles, or contiguous partes, or by a full Stomach which will press the Liver, & consequently the Gall-bladder, or violent Vomiting, &c. And I conceive bad if not fatal consequences would arise if this Bile
was

(a) Dr. Boerhave's own Words.

was perpetually to flow, and as Dysenteries are for the most part attended with Neauſea's, Reachings, and Strainings, ſo are the Abdominal Muſcles ſet in violent Action, by which the more pungent Bile is thrown into the Guts in greater quantities *Now* than at other times, which gives an additional Weight to the Diſtemper.

But to return; To ^{ſtrengthen} this my Opinion, admit me to obſerve, that all Icteric Perſons have an uncommon diſtenſion in their Bowels, and are ſo very Coſtive, that the moſt ſtimulating Purges and Clyſters have been for ſome time found ineffectual; this is owing to ſome obſtruction in the Biliary Ducts, or more properly ſome Concretions in the Duſtus Cholidochus, which conveys the Bile into the Duodenum,

odenum, and is the cause of white Stooles in the Jaundice.

The Bile thus ~~is~~ ^{suppressed from flowing} is forced back and Regurgitates into the Venal circulating Blood, and in time if not Remedied, the peristaltick Motion looses it's proper Action; whilst on the other hand we see when this Obstruction is relieved by Medicines, The Bile at first rushes so fast into the Gut, that the Patient has for some few Days a Diarrhea or Loosness, which is the long wished for Symptom in that Case, as the Obstruction appears to be opened and consequently the chief Cause Removed.

It is true that most Authors have supposed the Cause of the Jaundice, to proceed from Scirrhusities of the Liver, but what few I have dissected, that have died of this Disease, have always found the Vessels
-stuffed

stuffed with concreted Stones, and believe this Opinion chiefly now prevails.

But I must admit (as I believe) that the Jaundice is produced from many other Causes, and the late great Dr. Boerhave with Skill and Judgment, has Learnedly described them in a Chapter of his Practical Aphorisms entituled, *Hepatitis et Icterus Multiplex*. They are such as from Inflammation of that Viscus, Callus Steatoma, Apostems, Cancers, Extraordinary and Violent Efforts of Vomiting, great perturbations of the Mind, inveterate Hypochondriack Affections, &c. But be pleased to observe that the two before assigned, (viz.) A Scirrhus Liver, and an Obstruction of the Biliary Canals, seem to be the most general, and the Latter of which most frequent.

The

The Case of Mr. Menzies which was communicated to the Royal Society in the Year 1730, by Dr. Alexand. Stewart Physician then to the Queen, plainly convinces us that it is impossible to have Stooles without Bile, an Abstract of which may not be in this place improper

‘ Mr. Menzies being in the 40th Year of
 ‘ his Age, was wounded in the Gall-Blad-
 ‘ der about three in the Morning October
 ‘ 30th 1728.

‘ I was call’d November 2d. about Ele-
 ‘ ven in the forenoon being the fourth Day
 ‘ after he receiv’d the Wound.

‘ The Surgeon who had attended him
 ‘ from the Begining, told me that his Belly
 ‘ had been all along distended as I saw it,
 ‘ giving the appearance of a Tympany or

Ascites,

‘ Ascites, and it continued at the same
 ‘ pitch of Dissention neither Diminished nor
 sensibly encreas’d to the time of his Death.
 He never once went to Stool from the time
 he received the Wound, tho’ strong Purges
 and Clysters were given for several Days,
 and without any Opiate having ever been
 given, which might have retarded Stooling;
 yet he took what was thought a sufficient
 quantity of Drink and Liquid Food,

‘ Upon opening the Body before several
 ‘ Surgeons, the Abdomen appeared
 ‘ distended as said before, and the Skin of
 ‘ the Belly tinged Yellow as Saffron in many
 ‘ places, a Triangular Wound appeared
 ‘ about two inches on the right side of the
 ‘ Navel, the Direction slanting upwards
 ‘ Obliquely thro’ the Integuments and
 ‘ penetrated thro’ the bottom of the Gall-
 bladder

• bladder, without wounding the Liver or
 • the Neighbouring partes.

The Gall-Bladder was flaccid or collapsed containing only a few drops of Gall, which slightly flow'd out on *Squeezing* into the cavity of the Abdomen thro' the wound.

It is also observed that the Bowels had lost all Motion *thro' a Total want of Bile only*; for a more perticular Account, Vid. *Philos. Transf. Abd. Vol. 6. Pr. 3d. Pag 94.*

Dr. Stewart has also communicated an other Case of the like Nature, which is that of a Serjeant of the Horse Guards, whose Gall-Bladder was wounded, without any other Powel being much Hurt. The Symptoms whilst he Lived (which was only seven Days after, the Wound given) were a great distention of his Belly, but without

Ructus

Ructus or Flatus. upwards or downwards, or Borborygmi, no Passage by Stool, notwithstanding all the Art of the Profession was Administred. ~~The~~ further account of the Case you have in the Scotch Medical Essays Vol. 3d. Pg. 406, where you will find it most Beautifully described and Elegantly Commented on.

More Instances to prove that Costiveness proceeds generally from an Obstruction of the Biliary Canals might be recited; But for Brevity sake, shall only acquaint you that whilst a Pupil in Mr. Guys Hospital, I opened a Body that had large stones in the Bile Vessels, some of which were of a Brownish Colour, and near as big as Nutmegs, which caused so great a Retention of the Bile, that they withstood all the Bombardments of the Ablest Æsculapian Engi-
 ciers

gineers, nay even Mercury himself was not able to force the Breach, for the Patient by Dr. Oldfields Order took near a Pound of Quick-Silver without any effect, all which I took out of his Stomach after his Discease which I believe to this Day may be seen at the Apothecary's of the said Hospital.

From hence it is not to be doubted, but the Patient would have had stools, if the Concretion could have been Dislodged.

I am sensible that some time there may be other causes, tho' not so Obvious or common, which may retard, or even totally check this Vermicular Motion; and of these, are such as, the want of a due Energy, or Activity in the *Life it self*, or the want of a due Influx of Animal Spirits into the Nerves subservient to the Intestines,

or a considerable Stoppage of any part of the Intestinal Canal, thro' Spasmodic Contractions, Volvulus or the Like; and also I am perswaded that some if not all of these (the Volvulus excepted) do frequently happen in the Colica Pictavorum, but here I must suppose the Bile to be sufficiently pungent, and Irritating, if it had it's due Course and no such Obstruction in the Intestines to happen.

What is here said of the Extraordinary Effects of a Retention of the Bile, or a voluntary flowing into the Intestines too abundantly, may be further and almost demonstrably proved by what is very frequently observed in new Born Children, viz. *Their whole Body's appearing very Yellow*; The Reasons for which be pleased to give me leave in this place to Consider, and it will
with

with much strength Corroborate my Argument.

That Children newly Born, and sometimes a few Days after appear with a Distinct Ictitious suffusion over them, has often been taken Notice of by the prudent, tender Mother, as well as by Midwives and careful Nurses.

This Yellow Tawny discolouring of the Skin, is very evidently owing to no other Cause, than that of the Bile (which must be derived to the Foetus whilst *in Utero* with the Mothers Blood thro' the Umbilical Vessels, and being as yet of no Use to the tender Babe, is stored up plentifully in the Hepatick Channels and Reservoir) being stopped from flowing into the Duodenum, by the thick and Glewy Mucus, with
which

which the Intestines at this time abound, and by which the Mouth of the Porus Bilarius is strongly Obstructed.

This Passage being thus damm'd up, some part of the plentiful Bile regurgitates into the Hepatick Veines and is mixt with the Circulating Mass of Blood, which is the cause of a sort of Jaundice and appearance of the Yellow Hue.

Probably, long, tedious, hard, cruel and difficult Labours, together with the struggling Efforts of the long confined Infant, to rid the Mother from it's now no more welcome Guest, and as it were by Instinct of Nature struggling to appear before her, to refresh her Spirits, to give comfort and instantly to wipe off the cruel Tear, by casting smiles on all the tired expecting Friends.

I say these tedious and almost insupportable Labours ~~that~~ contribute often to this regurgitation of the Bile, and Children with so much Difficulty brought into the World, are observed not only to be so discolour'd, but are found exceeding Costive, nay I have known a Child been Born three Days without a Stool altho' Clysters, &c. has been administred, As this Case too often happens, and internals frequently failes of Relief; Natures providential and tender Care the Milk seems most properly ordained for Releif, for by it's then and Deterging quality, it seems wisely adapted to this very purpose; and is capable to force away the thick Obstructing Mucus in the Bowels and promote Evacuations;

As soon as this Stoppage of the Bile
comes

comes to be removed, it flows copiously into the Bowels, insomuch that in some of the first Days we generally find the new born Babe to be much Gripped, and have frequently greenish Bilious Stooles, (called by Nurses Loosness) which are owing to the great irritation of that stimulating Liquor *the Bile*.

Another Argument of Proof of what I have Advanced concerning the force of the Bile, may be taken from what is notoriously observed in many old People of both Sexes, for it is certain that all the Juices of such are commonly ranker and more acrid than in younger People, as appears by their Spittle, Sweat, Urine, Fæces &c. And consequently in such the Bile must be sharper, and more Vellicating (*Cæteris paribus*)
than

than in younger People, whose Humours are milder in general. And how great a Number doe we daily see among the Aged dye of Diarrhæas and Dysenteries, ^{at least} however these are the Symptoms that for the most part conclude their last Scenes of Life, and many of these I am inform'd have fallen lately under the furious Rage of the present Distemper.

Having now Explain'd the chief and most immediate Instrument, and the manner how the peristaltick Motion is carried on, and also the ill consequences of the Biliary Pipes being blocked up, as well as the fatal Mischief of the loss of Bile, I shall now consider the Scat and Symptoms with the various consistancies of the Stooles in a Dysentery, and shew the reasonableness of this my Opinion.

From

From the aforesaid convincing Proofs of the general Causes of a Retention of the Fæces in the Bowels, we may be assured that the strongest Purges cannot Operate, neither can Natural Stooles any more be Evacuated, than the peristaltick Motion be carried on without the stimulating Force of Bile; therefore (vice versa) it evidently appears for Truth, that the Dysentery is caused by too great a quantity of Bilious Juices, flowing continually, and too abundantly into the Duodenum, caused by some Disorder of the Liver and Gall-bladder, from which arises the Griping and Grumbling pains in the Bowels, which are well known to be the first Symptom of this Disease, and most commonly appear two or three Days before bad Stooles shew themselves.

This

This Opinion several Centurys past was hinted at by a Judicious tho' Ancient Physician, yet it has by most Modern Writers that I have seen, been overlookt, or at least small notice taken; The Author I mean is *ALEXANDER*, who was a Grecian, and made a great Figure in Physick at Rome in the Reign of Justin Junior, which was in the Year 565, The Words are, *in a Weakness of the Liver, and Dysentery, Rheubarb is good.*

The Conjunction here made of the Liver with the Dysentery, is evident Proof that he believed, that the former was affected in such a Disease.

That a Dysentery so many Years since was known appears plain from his ordering Rheubarb. For he mentions it only as an Astringent,

Astringent, and truly it's purging quality in those Days were not known, for *PAULUS* who wrote after *ALEXANDER* seems to be the first who takes any Notice of the purging Quality of this excellent Root, and he tells us how we may make some laxative Medicines stronger by the addition of Rheubarb.

Dr. William Cockburne late of London so far Espouses this Opinion as to say, that when a Flux proceeds from indigested Food, Fruits or such like, it is easy of Cure.

But when Bile is the Cause, it is more difficult.

It is no small Satisfaction to find my Hypothesis nearly tally with not only that of Alexander's, who was the greatest in
his

his Age, but also with that of so Emminent a Modern Writer.

By all Hands it is agreed, that this Dis-
temper has been ^{this last season} more severe and frequent
than heretofore, but it is not to be won-
der'd at, when we consider and Examine
the strong predisposing Cause that contri-
buted to render the Dyfentery more Ob-
stinate and Fatal than Usual (viz.) That
there were six or seven Months of conti-
nual Dry and very Hot Weather, which
made the Blood more adust, and conse-
quently all it's Secretions, particularly *the*
Bile now much more acrid, than in
an ordinary course of Seasonable Weather;
The Oyls and Salts of which the Bile is
chiefly compos'd, being by means of the
extraordinary Heat, and Drought very
greatly exalted (as the Chymists Phrase it.)
Beside

Beside from such Causes we have too much reason to suspect that the Glands in the Mesentery became considerably obstructed, and also of consequence the Lacteal Vessels which pass thro' them, which ought to receive a considerable Mixture of thin soft Lymph, insomuch that a great part of the Chyle and Lymphatick Juice is now hindered by such Obstruction from performing it's natural Course, and ^{the Blood} seems to be much bereeved of the necessary supply of those mild Fluids.

From hence we may learn that all Medicines which open and Deobstruct those Glands, are of most Eminent Service in the Cure of Laxes, Diarrhoeas and Dysenterys.

To Proceed; From the first Attack to it's fatal Period. The Patient complains of a Violent inward Heat in his Stomach, and
by

by desiring his Hand to the place of Pain, the right Side is rather pointed at, and that part of the Diaphragm to which the Liver is by it's broad Ligament tyed to ; which Demonstrates that the Heat complained of is from an Inflammation of the Liver ; for it is situated so advantageously as to cover part of the Stomach, being ordain'd to assist digesting the Ailiment therein, as well as the immediate Organ for Secreting the Bile from the Blood, therefore if there is a Dis-temperature of the Liver, the Hepatick Juices will become vitiated and Depraved.

If we reflect on the largeness of the Liver (which in Adults is about four pounds) it will appear that Providence foresaw the Necessity of secreting a large quantity of Bile, as being absolutely necessary for the well Being of the Animal System, and tho' the

the Gall-Bladder is very small in Proportion to the Liver (being not above the size of a small Henn's Egg) Yet in healthy Bodies it is a sufficient Reservoir for accepting all that the Liver prepares, because ^{part of it} ~~slowly and~~ continually ~~it~~ keeps drilling ~~small portions~~ into the Gut Duodenum for the Uses before mention'd.

As this is the State in a healthy Constitution, so will it appear contrary in some Inflammatory Disorders of the Liver, for the Gall-Bladder being seated in a Depression on the Concave side, is subject to be compressed or squeezed by every swelling or Distention of the Former, and to so great a degree as to be incapable of retaining it's proper Contents (viz.) *The Cystic Bile*; therefore, instead of distilling slowly the Hepatick into the Bowels, it is compelled also to discharge

also of Dyentery
 discharge ~~is~~ with great Precipitation and
 force, having it's sides not only comprest,
 but also it's Coates relaxed.

Another Cause of the Dyfentery is chiefly
 from the Southerly Air, that in one time of
 the Year blows here, and as soon as the
 Wind begins to Chop about to the South-
 ward, *commonly* Dyfentery's make their appearance,
 for then as it were the natural Clymate is
 altered, the Air being at such times more
 moist, Phlegmy and Light, than when it
 was Notherly, therefore it is not to be
 wonder'd at, that the Humane Structure
 becomes too much unbraced, and when so,
 the consequence will be a Relaxation of
 the Liver and other Secretory Organs, they
 being by their natural Structure more sub-
 ject to be Unbraced.

That

That the Body becomes Relaxed in a moist, Light, and Damp Air, is sufficiently proved by the Barometer ; for in such Air the Mercury always falls, whilst in a bright, sharp and serene one it arises high, and Dr. Hally says he has found, that the
 ‘ rising of the Mercury in the Barometer
 ‘ hastily, forebodes an East or North-East
 ‘ Wind.

‘ That the falling of the Quicksilver portends Southerly or Westerly Winds, intermixt now and then with Showers of Rain.

Now as much Rain almost always Sets in with the Southerly-winds, this Island is subject to in one Season of the Year, it is not greatly to be wonder’d at, that Sickness takes it’s Birth or Date from thence, for moist Vapour’s being exhaled from the Earth, the Weight and Elastic Force

of the Atmosphere is Diminished.

That such damp Air will cause a Relaxation of the Liver, and also on the Gall-Bladder, is very evident from the lowness of Spirits which is felt by the Afflicted at such times, as well as by all Hypochondriacks; for the pores of the Skin being stopped up the Materia Perspirabilis is forced inwards upon the Intestines; and when ever the excretion of the Perspirable Matter (which is much greater than all other excretions of the Human Body put together) is inverted and precipitated on the Intestines, it falls thro' them as it were in a flood, Vellicating, and corroding their inward Membranes, and Ulcerating the the Mouths of their exhaling Vessels, occasioning thereby many of the severe Symptoms that attend this Distemper.

Now

Now let us superadd this circumstance, of inverted perspiratory Matter being forc'd violently into the Intestinal Vessels, to *What* has already been related, of the Dire Effects of the Bile, and we shall be able to Form a clear and just Idea of the Distemper, that yet too much Reigns, and has hitherto occasion'd such Fatality amongst all sorts of People in this Island.

Surely no one can deny from what has been said, that a superabundant quantity of Bile falling into the Bowels too hastily, will cause a Dysentery; however least I have not made it clear to some, admit me to remind you that the very Bile it self is en voided with the stooles, which surely a sufficient Proof.

From every one's Observation, it is
evident

evident that a North-East Wind is most Healthy to this Island, but it is the contrary in England, for when the Wind blows out of this quarter every Person muffles up to screen himself as much as possible from it, for Diseases are well known at such times, to be more rife or frequent and more especially the Liver is observed to be greatly affected, and very often shews it self Diseased by signs of an approaching Jaundice, a Distemper strictly and exactly reverse to the Dysentery; But as frequent in such Seasons in the British Isle, as Fluxes in Barbados during Southerly Winds.

Having laid my great Stress ^{principally} on the Cystic Bile as being chiefly the cause of Dysenterys, when by any means it is either ^{ional Acrimony or moist} perverted by Air, or forc'd out of it's

Nidus

Nidus in too great a quantity, by an Inflammation of the Liver, &c. I beg leave to remark that in all Inflammatory Disorders the Liver and Bile are more or less affected,

This Dr. Deideir a French Physician has Observed, and says that Persons who have died of Malignant Feavers, have their Bile of a Grass Green Colour, and that those who in the Year 1721 died of the Plague at Marseilles, had their Livers enlarged to double their natural Seize, as well as stuffed with Blood, and also their Gall bladders, full of black and greenish Bile,

I have hinted this to shew that the Bile is subject to undergo alterations by Diseases as well as capable to procure a Distemper, when it's secretions and excretions are defective, or when it is not in a natural healthy State

State, and the Doctor further observes, that the Bile of a Person who dies of the Plague, will kill either when it is outwardly applied to wounds or injected into the Veines, and this he has many times made Experiments of upon Animals.

Having now given you my Opinion of the Causes of the Distemper here treated of, I shall humbly submit it to your Consideration, whilst I cast my Eye upon some of the chief Symptoms that the Patients are afflicted with, and shall endeavour to point out their different States.

The first Symptoms that attack the tender Body, are griping Pains for two or three Days, accompanied with frequent large Bloody and Slimy Stools.

The Blood so voided with the Excrements, may be accounted for, by three different Causes. (viz)

The

The first, is by a large and hard quantity of Foeces pressing and extending the Bowels beyond their natural conformity and just Tone, so that the Haemorrhoidal Vessels are thereby forced to let goe ^{part of} their Contents,

The second, proceeds from a violent Inflammation of the Bowels, which they are subject to in Dyfenter^{ies} Cases, and are very frequently so disorder'd, from which the smallest Vessels that only in a natural State transmitted serum or Lymph have their Diameters so enlarged as to give way to the red Globuler particles of the Blood to pass thro' them, and by their exhaling Mouths into the Cavity of the Intestinal Canal. Many instances have likewise been taken notice by Physicians ' That in some severe Cases *of this Disorder*, Blood has

appeared

' apparently flow'd both thro' the Ductus
 ' Cholidochus and Pancreaticus and so
 ' been carried thro' the Body with the
 ' Faeces.

The third Cause, arises from the sharp
 and pungent quality of the Bile, irritating
 and Excoriating the Bowels themselves,
 which it has great Power over at this time,
 because by number of former Stools, their
 safeguard (the natural Mucus) has been
 drove off, as it were by the torrent like
 expulsion by which the tender Bowels are
 robbed of Natures providential Shield, and
 left guardless to the Stimulating Acid par-
 ticles of the Bilious juices and Corrosive
 Salts of the Excrements

About the fourth or fifth Day, the
 Stools often appear like Dregs or washing
 of Meat, it is then that the Villous Coat
 of

of the Bowels is excoriated, and as it were gnawed into by the depraved Bile.

Hippocrates in his xxvi Aphorism says, if small peices of Flesh be ejected with the Excrement by him, who has a Bloody-Flux, *It is Mortal*; for the Guts are excoriated, coroded, and begins to Sphacelate.

The last Stools that are voided before Death, are most commonly of a Blackish Yellow, and very frothy, which shews their consistence to be composed, partly of Bile tho' frequently they are from a Mortification begun.

To this, the Divine Old Physician, observes that a Flux proceeding from *black choler is Mortal*.

He a little further explaines, what he means by black Choler, in saying it signifies *depraved Bile which has lost it's balsamick*

Sanick partes; and is become sharp and Acid and hence corrodes the Guts and cause such a Flux as must needs prove Mortal, being a sign that all tends to a Mortification.

And truly the horrid Stenches of the Stooles, the convulsive Hiccups, intermitting pulse, coldness in the Extremities clearly and evidently corroborates and Testify's *of* this Opinion.

These are the Chief Symptoms of this monstrous Distemper, which has for many Years seem'd to be the opprobrium Medicorum, as appears by the various ^{*methods of cure*} ~~Recipes~~ that almost infectually have been put into practice hitherto; *a small Recital of which* ~~perhaps~~ may not be disagreeable to you.

The first I shall mention is *Alexander* who lived in the sixth Century and flourish't after

after Aetius, this Learned Greek, orders for a Dysentery at first, Bleeding to two (a) Heminas, and also very ~~justly~~ condemns the rash and undistinguishing Practice of some who immediately throw in Opiates; for says he *‘ They doe but bind up the humours
‘ for a Time, affect the head and Strength,
‘ and occasion a more violent return of the
‘ Flux afterwards.*

Dr. Friend speaks to the same purpose, and says Opiates should not be used in Dysentery's; but in case of absolute Necessity; and he commends Alexander's just and Skillful Argument against so dangerous a Practice.

PLINY,

(a) Hemina' signifies an old Greek Measure, it contained about four Ounces and a half; among the Romans; it is half a Sextarius, the Moderns makes it to hold ten Ounces.

PLINY, advises for a Dyfentery, Water
in which a Hot Iron has been quenched.

DIASCORIDES, orders Wine, that has
had the Hot Iron quenched in it.

AVENZOAR, an Arabian who followed the Galenical System and professed himself of the Dogmatical or Rational Sect, says he cured himself of a Dyfentery by wearing an Emerald upon his Belly, and advises, giving it inwardly. The Dose he orders is about six Graines pulverized.

AETIUS gives this Stone a Character for stopping any Flux of Blood.

With the utmost Submission to these two Antient Writers, I cannot forbear giving my Opinion, that the Emerald either outwardly applyed, or so small a Dose inwardly taken, can be ^{no} ~~any~~ ways Beneficial to the Afflicted, but appears an Idle Conjecture.

Dr.

Dr. WALKER, tells us at the Siege of Londonderry, the Soldiers were so reduced thro' want of Provisions, and the Lax, that they were forc'd to Eat a Mixture of Suer and Starch, by which they were not only preserv'd from Famishing, but also were cured of the Disease.

Dr. WILLIS, observes that in the Year 1670 (which was the Time that the Dysentery reigned so Surprisingly Violent in London; that many died in twelve Hours, tho' they were perfectly well the Day before) that Medicines of the Warine Class had the best Effect, and many Order'd with them, Toasted Bread spread with Treacle, which was dip't in Strong Wine, and applied to the Stomach.

When our English Army in Ireland laboured under a violent Dysentery, another
Now

New Medicine was thought on, which was the funguous Substance of Wallnuts, that lies betwixt, and seperates the lobes of the Kernel, this being dried and powdered, a moderate quantity of it, was given in Wine, and happily had Success, tho' the Disease had Eluded the Skill of all the Physicians before.

(b) Dr. de Jussieu of Paris, has strongly recommended to the *Academy of Sciences* the *Simarouba*, which is the *Macer* of the Ancients, he say's two Drams made into a Decoction is a Dose which has had Successful Effects.

This Medicine has been tryed here, and it would give me great Satisfaction, if in
truth

(b) Vide memoir del' Acad des Sciences for 1729.

truth I could acquaint you, that it has been of service, but alas by strict enquiry, it appears not worth a further Tryal.

Dr. KRAMERUS, assures us, that a Decoction of common Millet Seed (call'd St. Ambroyes Syrup) may be depended on for a Cure.

A Gentleman whose Name is concealed, has recommended to that Indefatigable and truly Eminent in his profession, Dr. *Monro* in the Year 1733. The Conessi Bark, it growes on the Cormendel Coast in the East Indies, the Dose he orders is half a Dram powder'd, and to be given four times a Day for three or four Days.

This Learned and Excellent Physician has tryed the Medicine, and say's he cured an obstinate Dysentery with it, which would not yeild to any Medicine before.

In

In the Philosophical Transactions of the Royal Society, you have a Method prescribed for Relief, it is Intitled *An Infallible Cure for a Dysentery* which I Refer you to, vid Vol. 3d, Pag. 114.

Dr. Batemans Pectoral Drops by many are extoll'd for a good Medicine in this Disease, whilst by others Dr. Lovels Styptic is cryed up as superior to any, and no less Infallible.

What Service the Ceratum Antimonii (which I have recommended to the Practitioners, from the good Authority of it's Efficacy, as it is set down in the first part of the 5th Volume of the Scotch Medical Essay) has been of, at present, can only say, that it has met with more Success than any other Medicine before it; and this I have from so good Authority, that no one can dispute

dispute it, I mean from the Mouth of that Modest and Judicious Gentleman Mr. John Linahan.

I shall forbear Reciting the almost numberless Methods that have been prescribed for Relief, and the Forms set down in the late Authors, *Allen, Shaw*, and others, believing the Reader will think I have been too prolix already, as well as, it would swell beyond the bounds I first intended this Epistle.

And as I do not pretend to enter upon the Therapeutic Province, so hope the Readers will excuse me from relating how Efficacious, the Ipecacuanha, Cinamon (in various Formes) Astringent, Balsamick, Absorbent, and Diaphoretick Medicaments are in this Disease; and it is sufficient to understand, that they are only to be Admin-
fired

fired by able Physicians, but even with the
 Utmost Tenderness and Circumspection,
 first weighing the Occasion, Season, Age
 and Constitution with the Symptoms and
 Stages of the Distemper.

And as these ^{Medicines} ~~Formes~~, as well as the
 many others, which judicious and experi-
 enced Men have prescribed, ^{have} been almost
 found insufficient to give certain Relief in
 all Cases, it is to be hoped that by the
 Labours of the Learned, some more Ef-
 fectual Means may be hereafter fallen up-
 on, therefore I forbear at present giving a
 perticular account, being sensible it would
 not give you a pleasing and Satisfactory
 Amends for your spent Time, which I am
 convinced you hold dear by the Zeal you
 always have shewed for the Good of Man-
 kind, in Administring Relief to the Poor
 and

and Distressed, as also by the Numbers
you have with great Skill and Care Rescued
(for a time) from the jaws of the Grave
and Death.

To return to the Subject and to End my
Narrative.

With what Fury this *tyrant* has raged
this last Season, and the Numbers *it* has
swept from the Surface of this small Island,
each Plantation too Evidently convinceth
us; and with Amazement in few Hours
has it eagerly snatched off the dearest
Friend; who just before seemed Harty,
Hale, and Well. For quickly this Monster
Robbs the Body of it's principles of Life,
causing a Dissipation of the igneous par-
ticles of the Blood; *spirulous thro' the exhaling Mouths*
~~The Membranes of~~
relaxed Vessels
~~the Bowels being worn thin, their texture~~
~~soon gives Way and Breaks, which lets~~
~~thro'~~

~~thro' the fiery and Spirituous Caputles of~~
~~the Blood~~; for the Mechanism of our Bo-
 dies, is not unlike to a *Chymists Furnace*,
 which at first well retaining the Heat, is
 very proper for the Operation of Art; but
 at last *Chinks, and Crevices being made*
therein, it ceases to be so, the Heat get-
 ting away through them, what Fire soever
 you kindle therein.

From hence we may learn how Death
 Derives (viz.) First by a gentle Debilita-
 tion of Natures Stength, 2d. a Consum-
 tion of the moist principles of Life, lastly
 a total Extinction of Natural Heat.

with all these kinds of Disorders
Sanctorius makes the maintenance of Life
 to depend upon the Renovation of the partes

The Illustrious BACON conceived that
 Death Ensued from an unequal reperation
 of the liquid or soft, and the dry or more
 solid

Solid Parts, or from a Desiccation of the Radical Juices.

This opinion is agreeable to Dr. *Sprengell's* Explanation of the xxviiith Aphorism of (c) Hippocrates, who says, ' When our
' circulating Juices are wasted, and Ex-
' hausted by the violence of the Disease,
' then Motion ceases, and consequently
' Heat, which is the Effect of Motion,
' not at once, but gradually, beginning at
' the Extremes, and ending at the Center.

(c) *Terminus vero mortis est, cum
animæ calor supra umbilicum ad locum
septo transverso superiorem ascendit, et
omnis humor exurit, cum autem pulmo
et cor calore in mortiferis locis coacervato
humorem amiserint, caloris Spiritus con-
fertim exhalat, cujus ope totum cum toto
compactum erat.*